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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,523

09/28/2006

Leonardo Cadeddu

2505-1023

4659

466 7590 09/10/2008

YOUNG & THOMPSON
209 Madison Street
Suite 500
ALEXANDRIA, VA 22314

EXAMINER

BAYOU, AMENE SETEGNE

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

09/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/594,523	Applicant(s) CAEDDU ET AL.	
	Examiner AMENE S. BAYOU	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/28/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 -6 are rejected under 35 U.S.C. 102 (b) as being anticipated by Takeyama et al.(US patent number 5239972).

3. In re claim 1, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- A suction system comprising a suction pump (swirl generating device 201 which generates vacuum, in order to pump oil and gas) ,in figure 8 and 9, having at least one suction connection (203) and a delivery connection (216), a receiving reservoir (602) connected to delivery connection (216), connecting pipings from a suction connection (203) to a first space (interior space of 205) from which a first fluid (oil-gas mist) should be sucked, and connecting pipings (611,609,610,607 from delivery connection (216) to receiving reservoir (602), characterized in that the system further comprises a connecting piping (601), extending from a second space (internal space of 602) from which a second fluid (blowby gas) should be sucked, to at least one suction connection of the pump and comprises a device (711,in figure 9) disposed for causing an intermittent operation of the second fluid suction by the pump responsive to the level

Art Unit: 3746

reached by the fluid in second space (internal space of 602) , in column 9,lines 54-68.

3. In re claim 2, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- Pump (swirl generating device 201 which generates vacuum, in order to pump oil and gas) is a vacuum pump (column 8,lines 62-65), first fluid is air (column 8,lines 51-52) , first space (interior space of 205) is a depressurized reservoir (because of the vacuum generation in side the space) , second fluid is oil (blowby gas also contains oil) and second space (internal space of 602) is a space wherein oil has a tendency to accumulate (internal space of 602 is also a reservoir for oil),in figure 8.

4. In re claim 3, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- Pump being a part of the system is of the kind having two suction connections (203,601), a first suction connection (203') of the pump is connected to first space (interior space of 205) for sucking therefrom first fluid and the second suction connection (601) of the pump is connected to second space (internal space of 602) for sucking therefrom second fluid, in figure 8.

5. In re claim 4, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- The device (711) disposed for causing an intermittent operation of the pump in sucking second fluid (oil) responsive to the level reached by a fluid in

Art Unit: 3746

second space (internal space of 602 or 703) comprises a means for measuring the level reached by second fluid in second space an interception means interposed in connection from second space to at least one suction connection of the pump and means for activating interception means when level of the second fluid comes down a pre-established minimum level, and for inactivating interception means when level of the second fluid overcomes a pre-established maximum level, clearly discussed in column 9, lines 54-68.

6. In re claim 5, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- Connection (601) from second space (internal space of 602) to at least one suction connection of the pump opens near the bottom of second space and inside second space in the bottom portion thereof (clearly seen in figure 8), is installed a device provided with a float (711), which closes the opening of connection thus intercepting the suction of the second fluid by the pump when the float along with the second fluid reaches the pre-established minimum level, in figures 8,9 and column 9, lines 54-68.

7. In re claim 6, Takeyama et al.'972 disclose a gas liquid separation device for an internal combustion engine including:

- Connection (601) can arrive to its opening near the bottom of second space (internal space of 602) either coming from below or coming from above and plunging into second space, in figure 8.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeyama et al.'972 as applied to claim 4 in view of Whiteman (US patent number 2966921).

10. In re claim 7 Takeyama et al.'972 discloses the claimed invention except:

- Means for measuring the level reached by second fluid in second space comprises means for revealing the level of second fluid installed in second space at different levels, interception means is interposed in connection outside second space and means for activating and inactivating interception means are controlled by means for revealing the level of second fluid.

However, Whiteman '921 teaches an automatic tank filling control including:

- Means for measuring the level reached by fluid (floats 26,28,30) in space (of tank 1,2,3) comprises means for revealing the level of fluid (column 2, lines 29) installed in space at different levels, interception means (valves 20,22,24 connected to each of floats 26,28,30 respectively) is interposed in connection outside space (valves 20,22,24 are located outside space of tanks 1,2,3 respectively) and means for activating and inactivating interception means (floats

Art Unit: 3746

26,28,30 are the means for activating and deactivating each of the corresponding valves 20,22,24 as clearly indicated in column 2,lines 46-48) are controlled by means for revealing the level of fluid (floats 26,28,30 are also means for revealing the level of liquid as clearly indicated in column 2,line 29).

11. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the float valves of Takeyama et al.'972 to reveal the fluid level as taught by Whiteman '921 so that an operator could visually confirm or monitor the proper operation of the pumping system.

12. Claim 8 is rejected under 35 U.S.C 103(a) as being unpatentable over Takeyama et al.'972 as applied to claim 4 in view of Chandler (US patent number 6568507).

13. In re claim 8 Takeyama et al.'972 discloses the claimed invention except:

- The interception means is embodied by an electromagnetically controlled valve intended for intermittently opening the passageway from second space to pump.

However, Chandler '507 teaches gas and oil separator system for engines including :

- The interception means is embodied by an electromagnetically controlled valve (one of valves 116,118,119,controlled by controller 138) intended for intermittently opening the passageway from second space to pump, in abstract and column 6,lines 59-63

14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the valve operation of Takeyama et al.'972 by installing electromagnetically controlled valve instead of the float operated valves as

Art Unit: 3746

taught by Chandler '507 because it gives more efficient and reliable control of the pumping operation.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amene S. Bayou whose telephone number is 571-270-3214. The examiner can normally be reached on Monday-Thursday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/
Primary Examiner, Art Unit 3746

Amene S Bayou
Examiner
Art Unit 3746